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ABSTRACT

The electromechanical transducer consists of a stator (1) having a plurality of inner pole pieces (2) that describe a helix and a rotor having magnetic poles that similarly describe a helix. The rotor is constrained, for example by means of a spiral spring, so that the rotor can only move axially, no rotary movement is permitted. Each pole piece (2) of the stator is connected to a radial core (3) about which respective coils (5,6) are wound. Thus, the coils too describe a helix about the axis of the stator (1). The structure of the transducer results in the magnetic circuit having a helical component that contributes to the axial movement of the rotor. The transducer benefits from many of the advantages of rotary motors whilst providing linear movement.